

We claim:

1 1. A method comprising  
2 providing at least one of a microdevice and a nanodevice; and  
3 inserting at least one of said microdevice and said nanodevice into a fluid stream within a  
4 body.

1 2. The method of claim 1, further comprising the step of inserting at least one of said  
2 microdevice and said nanodevice into a cell.

3 3. The method of claim 2, wherein said cell is a red blood cell.

4 4. The method of claim 1, wherein the step of inserting further comprises the step of inserting  
5 the substrate into said cell via at least one of reversible osmotic lysis, electroporation, microfine  
6 needle injection, and particle gun injection.

1 5. The method of claim 1, wherein said biological member is selected from the group consisting  
2 of a blood cell, lipid molecules, a liver cell, a nerve cell, a skin cell, a bone cell, a lymph cell, an  
3 endocrine cell, a circulatory cell, and a muscle cell.

1 6. The method of claim 1, wherein at least one of said nanodevice and said microdevice is  
2 selected from the group consisting of a diagnostic system, a transmitter, a receiver, a battery, a  
3 transistor, a capacitor, and a detector.

1 7. The method of claim 1, wherein at least one of said nanodevice and said microdevice is  
2 inserted within said biological member.

1 8. The method of claim 1, wherein said biological member is one of a red blood cell and lipid  
2 molecules.

1 9. The method of claim 1, wherein at least one of said nanodevice and said microdevice has a  
2 substrate selected from the group consisting of Gallium Arsenide, silicon, and silicon oxides.

1 10. The method of claim 1, wherein at least one of said nanodevice and said microdevice is  
2 formed using one of optical lithography, electron beam lithography, ion beam lithography, X-ray  
3 lithography, and spatial phase-locked electron beam lithography.

1 11. The method of claim 1, wherein at least one of said nanodevice and said microdevice is a  
2 resonance type nanodevice.



1 15. A method comprising:

2 providing at least one of a nanodevice and a microdevice; and

3 inserting at least one of said nanodevice and said microdevice in a fluid stream within a

4 body, wherein at least one of said nanodevice and said microdevice is extracellular.

1 16. The method of claim 15, further comprising the step of chemically modifying at least one of  
2 said nanodevice and said microdevice such that it is adapted to prolong vascular retention,  
prevent immunologic detection, or prevent unwanted endocytosis by cells.

1 17. The method of claim 15, further comprising the step of chemically modifying at least one of  
2 said nanodevice and said microdevice with an organo hydroxyl.

1 18. The method of claim 17, wherein said organo hydroxyl group is selected from the group  
2 consisting of poly (ethylene glycol), methoxypoly (ethylene glycol).

1 19. The method of claim 15, further comprising attaching a lipid anchor to at least one of said  
nanodevice and said microdevice with an organo hydroxyl.